

Mackie's treatment of miracles

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A recent discussion of Hume's argument concerning the rationality of accepting a belief that a miracle has occurred is given by J. L. Mackie in *The Miracle of Theism*. Mackie believes that Hume's argument is essentially correct, although he attempts to clarify and strengthen it. Any version of Hume's argument depends upon one's conception of miracles and laws of nature; I will argue that Mackie commits a simple logical error and that given his conception of laws of nature and miracles there is no reason to reject rational belief in miracles.

1. Mackie's analysis of laws and miracles

In order to discuss Hume's argument on miracles, Mackie says we must first develop definitions of laws and miracles that do not automatically imply that the concept of a miracle is incoherent or that it is logically impossible that a miracle occur.¹ Mackie notes that if we define a miracle to be a violation of a law of nature and define a law to be a regularity about the way the world works, then it is impossible that a miracle occur. These definitions imply that the proposed law that the miracle violated was not really a law, since it has an exception; thus the event is not a miracle, because it doesn't violate any law. But this is not Hume's argument, and Mackie says that in order to discuss Hume's argument we need different definitions of laws and miracles. We need an account of laws and miracles according to which the possibility of a miracle is not ruled out a priori, since Hume's argument presupposes an account of laws and miracles that at least allows for the possibility of a miracle occurring.

In developing analyses of laws and miracles Mackie begins with the above inadequate account and modifies it. But in weakening the above account we must not make it so weak that anything improbable or unusual counts as a miracle. According to Mackie, the key to doing this is to make use of the idea of an intervention into an otherwise closed system. We have a clear understanding of what it is to be a closed system and of what it is for something to intervene into this closed system. With a closed system something may interfere and the system may behave in a manner different than it would

have if there had been no intervention (p. 21). Mackie proposes to treat the world as one large closed system, and a law will describe the way the world works when there is no outside interference with this system: '[a]ll we need to do, then, is to regard the whole natural world as being, for most of the time, such a closed system...' (p. 21).

Upon this analysis of laws it is possible that a law be violated. It is important to understand that this does not mean the law is false; it only means the world behaved differently than it would have if there were no outside interference with it. Mackie then defines a miracle to be a supernatural intervention into the natural world: '... we can give a coherent definition of a miracle as a supernatural intrusion into the normally closed system that works in accordance with those laws...' (p. 22). After developing this account of laws and miracles it is now possible for Mackie to state and defend Hume's argument.²

2. Mackie's argument

According to Mackie's analysis, laws of nature 'describe the ways in which the world – including, of course, human beings – works when left to itself, when not interfered with' (pp. 19–20). Mackie also claims that a 'miracle occurs when the world is not left to itself, when something distinct from the natural order as a whole intrudes into it' (p. 20). From this Mackie infers that an event is a miracle only if it violates a law of nature. Mackie concludes that if one wishes to claim that a miracle has occurred, one must show both that the event occurred and that there is a law of nature that the event violates. But Mackie claims that will be difficult to show, because 'whatever tends to show that it would have been a violation of natural law tends for that very reason to make it most unlikely that it actually happened' (p. 26). According to Mackie, evidence for a natural law is evidence against a miraculous violation of it; whatever evidence supports the claim that there is a natural law a miraculous event violates, also supports the claim that the event did not occur. So if an event must violate a natural law in order to be a miracle, any evidence, such as testimony, supporting the proposition that the event is a miracle will also support the claim that the miracle did not occur. Thus it is irrational to believe on the basis of testimony that a miracle occurred.

The crucial step in Mackie's argument is that evidence which supports a generalization being a law of nature also supports the non-occurrence of the miraculous event. At this point it is important to emphasize Mackie's definition of a law of nature: a law of nature described the way the world behaves when it is not supernaturally interfered with. For our purposes, a law of nature describes the way the world behaves when God does not intervene.

Evidence for a law of nature will be evidence about how the world behaves when God does not intervene.

We must now investigate why evidence for an event that violates a law of nature is also evidence against the event occurring; more specifically, why is the evidence we have for a law of nature evidence against a miraculous violation of it? Suppose we have evidence E about how the world behaves when God does not intervene:

E: In all experiments done so far, when God does not intervene all A's are B's.

Evidence E support all A's are B's being a law of nature.³ Suppose that we also have the following testimony:

T: A situation occurred in which God did *not* intervene, and an A was not a B.

The evidence E which supports all A's are B's when God does not intervene is evidence against T.⁴ E is evidence against the testimony T being correct and the testimony T is evidence against the law of nature being correct. Thus our evidence for a law of nature is evidence against a non-miraculous violation of that law. Now consider the following testimony for a miracle:

T*: A situation occurred in which God intervened, and an A was *not* a B.

There are two important issues here: (1) whether E, our evidence for the law of nature, is also evidence against T*, and (2) whether the testimony T* is evidence against all A's are B's being a law of nature. I propose that in most cases our evidence for how the world behaves when God does not intervene is irrelevant to how the world behaves when God does intervene.⁵ In particular, E is not evidence against T*, even though E is evidence for the law of nature that T* is evidence for a miraculous violation of.

The reason E is not evidence against T* is that whether or not God intervenes is relevant to whether all A's are B's. Although a full account of this is beyond the scope of this paper, we can say that in general, for any property I, the truth of all ($\neg I$ and A)'s are B's is evidence against an instance of I and A and $\neg B$ ONLY IF property I is irrelevant to an A being a B. If we have reason to believe that property I is relevant to an A being a B, then it is illegitimate to ignore property I and claim that since all ($\neg I$ and A)'s are B's, that there are no instances of I and A and $\neg B$.

Letting I stand for God intervenes, this shows the problem with Mackie's argument. In the case of miracles we have very good reason to think that whether God intervenes is relevant to all A's are B's. Assuming God is powerful enough to change the normal course of events, we have reason to think things might be different than they normally are if he intervenes; after all,

the whole point of his intervening would be to change the normal course of things. We certainly have no reason to be confident that God intervening would make no difference in the way the world behaves. Thus we see that the evidence E is not evidence against the testimony T* being correct. E supports all A's are B's being a law of nature; it supports the claim that all A's are B's when God doesn't intervene. But that is not relevant to what happens when God does intervene; just because we know what happens when God doesn't intervene gives us no knowledge about whether God will intervene in the normal course of events and what would happen if he did. Thus on the basis of E we have no evidence about whether T* is true or false; E is irrelevant to T*. Our evidence for laws of nature is not negatively relevant to a miracle occurring. Hence it is incorrect that 'whatever tends to show that it would have been a violation of natural law tends for that very reason to make it most unlikely that it actually happened' (p. 26). Mackie's claim may be correct if we are considering cases in which God does not intervene, but his claim is incorrect if we are considering cases in which God does intervene. Hence his argument may show the difficulty in believing in a non-miraculous violation of a law of nature on the basis of testimony, but his argument fails to show any difficulty in rationally believing in a miraculous violation of a law of nature.

Perhaps the problem with Mackie's argument will be clearer if we look at it more schematically. Suppose that we have experienced many instances and no counterinstances of the generalization: *when $\neg I$, all A's are B's*. From this one could legitimately conclude that *when $\neg I$, all A's are B's*. It would be fallacious to conclude either *when I, all A's are B's* or *all A's are B's*, unless one knew that I was irrelevant to the probability of an A also being a B. If one knew that I was irrelevant, then it would make no difference that the evidence included only instances in which $\neg I$ was true. But if I is relevant to the probability of an A being a B, then it would be improper to infer *all A's are B's* from *when $\neg I$, all A's are B's*, as well as to infer that *when I, no A's are B's*. If we let *all A's are B's* be any law of nature, and I designate that God intervenes, the problem with Mackie's argument becomes clear. Evidence for *when $\neg I$, all A's are B's* may be evidence against there being an instance of A and $\neg B$ when $\neg I$, although it is not evidence against there being an instance of A and $\neg B$, when I. However, a miracle is an instance of A and $\neg B$, when I, and thus evidence for *when $\neg I$, all A's are B's*, which are our laws of nature, is not evidence against the occurrence of a miracle.

It is important to realize that the problem with Mackie's argument is a logical problem that is not restricted to the topic of miracles. The reasoning is fallacious and remains fallacious if we apply it to some other subject matter. For example, my experience is that when a plumber doesn't interfere with my plumbing, whenever I turn on the faucet water comes out. I might justifi-

fiably conclude that whenever I turn on the faucet and a plumber doesn't interfere, water will come out. But it would be a mistake to conclude that when a plumber interferes with my plumbing, water will come out when I turn on the faucet. It is very possible that because of the plumber's interference, when I turn on the faucet water won't come out. How my plumbing behaves when the plumber does not interfere with my plumbing does not determine what I should believe about how my plumbing behaves when the plumber does interfere.⁶ If Mackie's reasoning were correct it would be irrational to believe someone who claimed the plumber turned off the water to their home and water didn't come out of the faucet.

This example illustrates the problem with Mackie's argument. Just as evidence about how my plumbing behaves when a plumber doesn't interfere is irrelevant to how it behaves when a plumber does interfere, evidence about how the world works when God doesn't intervene is irrelevant to how it will behave when he does intervene. Evidence for a law of nature is evidence about how the world works when God does not intervene, but a miracle is what happens when God does intervene. Since evidence for a law of nature is not evidence about how the world works when God does intervene, it is not evidence against a miracle occurring. Thus we see that Mackie's two-pronged attack on the rationality of belief in miracles fails, because evidence for a law of nature is not evidence against a miracle which violates that law.

3. Concluding remarks

Mackie' has argued that the testimony for a miracle cannot be strong enough to support rational belief in the miracle. According to Mackie, the defender of a miraculous event

must in effect *concede* to Hume that the antecedent improbability of this event is as high as it could be, hence that, apart from the testimony, we have the strongest possible grounds for believing that the alleged event did not occur. This event must, by the miracle advocate's own admission, be contrary to a genuine, not merely a supposed, law of nature, and therefore maximally improbable. It is this maximal improbability that the weight of the testimony would have to overcome. (p. 25)

I have argued that Mackie may be correct if he is talking about a non-miraculous violation of a law of nature; that is because the law of nature is inconsistent with a non-miraculous violation of it. But we have seen that Mackie's argument fails when considering a miraculous violation of a law of nature. In such a case we have no reason to think that the event is improbable, let alone maximally improbable, simply because it is a miracle. Furthermore, it is possible that, contrary to Mackie, miraculous events are very

probable and events in accordance with the laws of nature are very improbable. For example, suppose we have a world in which it is a law of nature that when a staff is thrown down onto the ground, it remains a staff (and does not become a snake). When God intervenes and performs a miracle, staffs thrown on the ground become snakes. In this world suppose that God almost always intervenes when staffs are thrown on the ground, in at most a couple of cases has he not intervened. Thus it is very likely that God will intervene and perform a miracle, and very improbable that events will happen according to the law of nature. In this world we find that the probability of the miracle is very high, and the probability of an event consistent with the law of nature is very low. Thus events are not maximally improbable simply because they are miraculous violations of laws of nature. Given Mackie's definition of a miracle and of a law of nature, we see that a miracle is not maximally improbable simply because it is contrary to a genuine law of nature. Mackie's argument for the irrationality of accepting a miracle is thus seen to rest on a mistaken inference, and gives us no reason to think there are difficulties in accepting a miracle on the basis of testimony.

Even if Mackie were correct in claiming that the antecedent probability of a miracle is very low, it does not follow that testimony cannot raise the probability of a miracle to an acceptable level. The probability of a miracle after testimony is accounted for as $P(M/T^*)$. We can use a simple form of Bayes' theorem to see the relation between $P(M/T^*)$ and $P(M)$:

$$P(M/T^*) = P(M)P(T^*/M) \div P(T^*)$$

Bayes' theorem tells us that the probability of the miracle given the testimony is dependent upon the prior probability of the miracle, $P(M)$; the prior probability of the testimony, $P(T^*)$; and the probability of the testimony given the miracle, $P(T^*/M)$. Hence if the prior probability of the miracle is very low, the probability of the miracle given the testimony will also be low unless the probability of testimony given a miracle is much greater than the prior probability of testimony occurring. If $P(M)$ is low, $P(T^*/M) \div P(T^*)$ must be high in order for $P(M/T^*)$ to be greater than $P(\neg M/T^*)$. If the occurrence of testimony for a miracle is not very likely, but becomes much more likely if a miracle occurs, then the probability of the miracle given the testimony does not have to be low. Bayes' theorem tells us that in order for testimony to support an improbable event such as a miracle, the testimony must be much more likely to occur if the miracle occurs than otherwise. So whether belief in miracles based on testimony is rational or not depends upon the probability of the testimony as well as on the antecedent probability of the miracle.

Let us now return to Mackie's claim that the antecedent probability of a miracle is very low. We have seen that contrary to Mackie, this does not

follow from the fact that miracles are violations of laws of nature. Furthermore, the antecedent probability of a miracle occurring is dependent upon the probability of other propositions, such as whether God exists. According to Mackie, since theists believe in an omnipotent God, 'they cannot find it absurd to suppose that such a being will occasionally interfere with the course of nature, and this *may* be one of these occasions' (p. 27). A theist will generally believe that the antecedent probability of a miracle occurring is much greater than an atheist believes it is. Letting G designate that God exists, the theorem of total probability supports these intuitions:

$$P(M) = P(M/G)P(G) + P(M/\neg G)P(\neg G)$$

This theorem of the probability calculus informs us that the probability of a miracle occurring is dependent upon the prior probability of God existing, the probability of a miracle occurring given that God exists, and the probability of a miracle occurring given that God does not exist. Since a miracle requires the intervention of God, it seems that $P(M/\neg G) = 0$; if God does not exist he cannot interfere with the laws of nature. From this it follows that $P(M) = P(M/G)P(G)$. The greater $P(G)$ is, the greater $P(M)$ is. Assuming that $P(M/G)$ is fixed, $P(M)$ rises as $P(G)$ rises. In other words, the more likely it is that God exists, the more likely it is that a miracle can occur.

Since the probability of a miracle occurring is dependent upon the probability of God existing, the probability of a miracle occurring given some testimony is also dependent upon the probability that God exists. From this it follows that the rationality of accepting a miracle on the basis of testimony will depend upon how probable the existence of God is. I know of no argument for the conclusion that theism is intrinsically improbable, and a rational person can believe that it is very probable that God exists. But then a rational person could also accept a miracle on the basis of testimony.

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Notes

1. J.L. Mackie, *The Miracle of Theism* (Oxford: Clarendon Press, 1982), p. 19. Future references to this work will be denoted in the text by page number.
2. Although these are not theistic conceptions of laws of nature or of miracles, we will ignore this problem in discussing Mackie's argument. According to theism God has not

created the world and left it alone. Instead, God continually sustains the world and providentially guides what happens in it. Since God is continually acting in the world, a theist cannot say that a law of nature describes how the world works when God does not act in the world. I suspect that a theist would want to say something like laws of nature describe how the world works when God deals with it in the way he normally does, and miracles occur when he does something special or different than he normally does. Of course, this is rather vague and problematic, but it does illustrate that Mackie's conceptions are not in accord with theism.

3. According to Bayesian critiques of confirmation theory, this may not always be true. Although I think Bayesianism provides the best context in which to think of these issues, I will follow Mackie in not using a Bayesian framework for this discussion.
4. Claims of this sort are very controversial; they depend on various assumptions we make and are not a general result of an acceptable inductive logic. But we can safely ignore these difficulties for now.
5. Of course, neither this claim nor its denial is a necessary truth; it is possible that there be evidence that is relevant both to how the world behaves when God intervenes and when God does not intervene. E^* is an example of this:
 E^* : When God does not intervene all A 's are B 's and when he intervenes some A 's are not B 's.
 But most of our evidence is not like E^* .
6. This example is due to Barbara Scholz.

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